



BLACKHAWK®

the LONG RED

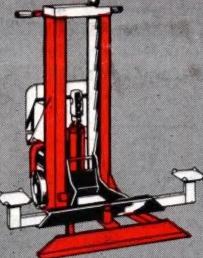
LIFTING LINE



HAND JACKS
PG. 2-3



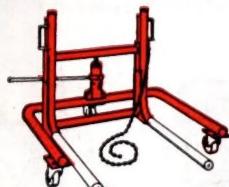
BUMPER JACKS PG. 5



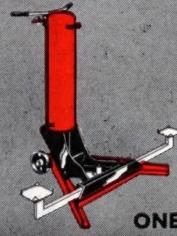
GARAGE HORSES
PG. 4



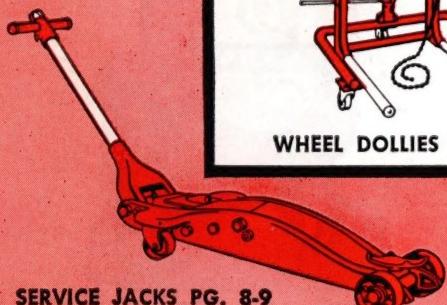
ROCKER STANDS
PG. 4



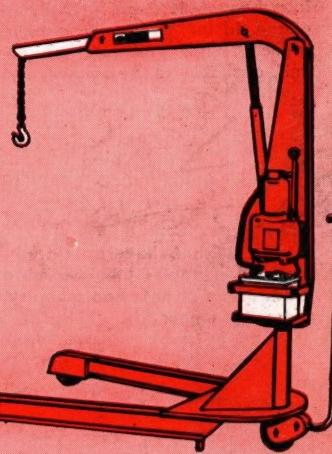
WHEEL DOLLIES PG. 12



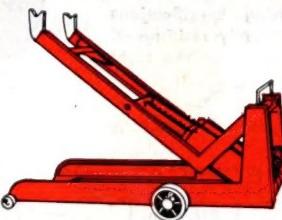
ELECTRIC ONE-END
LIFT PG. 6



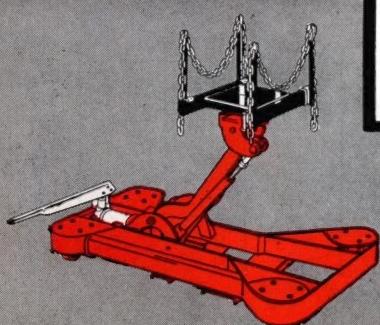
SERVICE JACKS PG. 8-9



CRANES PG. 14-15



MOBILE LIFTS PG. 13



TRANSMISSION JACKS PG. 10-11



SCISSORS JACKS
PG. 4

DISTRIBUTED BY

BLACKHAWK®

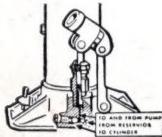
Hydraulic Hand Jacks

BLACKHAWK IS YOUR BEST BUY

Blackhawk, the world's leading manufacturer of Hydraulic Tools, offers a complete line of Hydraulic Jacks and Lifting Equipment designed and built to give you years of profitable, trouble-free performance. To insure the finest quality products obtainable, Blackhawk Jacks undergo approximately 200 manufacturing operations involving some 25 different materials. This is one reason why Blackhawk Hydraulic Tools enjoy a world-wide reputation for excellence . . . in service and long life. Only with Blackhawk can you choose with confidence the right equipment for the right job!



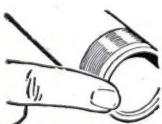
Cross-Milled Heat-Treated Saddle — Sharp as a hound's tooth. Cuts through dirt, grease and ice for firm, safe grip!



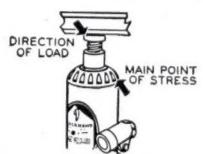
Service in Field — Less down-time, jack does not have to be dismantled! All valves located under one cap screw — easy to get at for on-the-spot cleaning, checking.



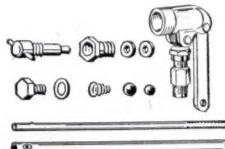
Interchangeable Pump — Easily replaced in the field with ordinary wrench. Vital pump is separate unit, available at a nominal cost.



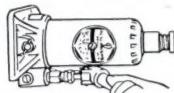
Mirror Finish Cylinders — Exclusive Blackhawk process provides mirror finish inside plunger and pump cylinders for longer life.



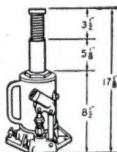
Tough Malleable Iron Top Cap — Solid rigidity! Supports off-center loading encountered in lifting today's heavier trucks, buses.



68% Interchangeability of Parts — Easy maintenance, lower repair costs, smaller part inventories, less down-time on equipment!



Full power on side — Blackhawk originated pump-on-side feature; extra utility for pushing operations! Convenient two piece handle stores easily in tool box or carton.



New Design Lifting Specifications — The only completely redesigned jack line that gives you the right capacity with the right lift!



TC-7 — 1 1/2 ton



BA-8.5 — 3 ton



AA-8.5 — 5 ton



CB-9 — 8 ton



D-8.7 — 12 ton



EA-11 — 20 ton

SPECIFICATIONS

Model	Cap. Tons	Low Hgt.	Hyd. Lift	Screw Ext.	Total Hgt.	Eff. Ram Area (internal) sq. in.	Ram Plunger Dia. In.	Base Size Ov'all	Can be Gauge Eq pd	Hdle. No.	Hdle. Lgth.	Wgt. Lbs.
TC-7	1 1/2	7"	5 3/8"	2 1/4"	14 1/4"	0.694	0.875	3 5/8x5"	no	H-8	22"	8 3/4
BA-8.5	3	8 1/2"	5 7/8"	3 5/8"	18"	1.231	1.122	4 1/4x5 1/2"	no	H-12	21"	13 1/2
AA-8.5	5	9"	6 1/4"	4 1/2"	19 3/4"	1.872	1.500	4 3/8x6 3/4"	no	H-12	21"	17 1/4
CB-9	8	9"	6 1/4"	4 1/2"	19 3/4"	1.872	1.500	6 5/16x7 3/4"	*	H-12	21"	19 3/4
D-8.7	12	8 1/2"	5 5/8"	3 1/2"	17 1/8"	3.281	1.875	5 3/4x5 3/4"	*	H-12	21"	26
EA-11	20	11"	6 1/2"	none	17 1/2"	5.157	2.250	6 5/16x6 5/16"	yes	H-12	21"	38 1/2

*Specify Special Gauge Jacks: CG-9B for 8-ton or DG-8.7B for 12-ton capacities. See opposite page.

Copyright Blackhawk 1959

... longer lasting, trouble-free!

HEAVY DUTY Standard

Preferred for brute power, top performance! These standard heavy duty jacks are low-cost power for countless jobs.

30-ton

FA-11

30-ton

FC-11

50-ton

GC-12

100-ton

NC-12

- Heavy malleable iron top cap
- Heat treated ram head
- Two speed pump (except FA-11)
- Overload valve (except FA-11)

- Base tapped for pressure gauge
- FA-11 has tough malleable iron base

SPECIFICATIONS

	FA-11	FC-11	GC-12	NC-12
Cap. Tons	30	30	50	100
Low Hgt.	11"	11"	12"	12"
Hyd. Lift	6½"	7"	7"	6½"
Total Hgt.	17¼"	18"	19"	18½"
Hdle. Lgh.	21"	20"	20"	20"
Wgt. Lbs.	65	71	124	225
Base Size	7x7"	8½x6x1½"	10x7½x2¼"	12x9½x3"



HEAVY DUTY DeLuxe

These big DeLuxe Heavy Duty Jacks are made for tough, grueling jobs. They're a must where jacking requirements demand superior equipment!

30-ton

FB-11

50-ton

GB-11

- Combination pump raises saddle to load fast, shifts to smooth, power speed.
- Pump and release valve are protected
- No exposure to rough treatment!
- Exclusive! Gauge Equip in Field — Minutes to install. No down-time!
- One piece steel cylinder and base. No leakage! No service problems!
- Wide base supports heaviest loads.
- Handle speeds spotting! Easy carrying to job!
- Cross milled; heat treated saddle!

SPECIFICATIONS

	FB-11	GB-11	FB-11	GB-11
Cap. Tons	30	50	Ram Plunger Dia. In.	
Low Hgt.	11"	11"	Base Size Overall	
Hyd. Lift	6"	5¾"	Hdle. No.	2,750
Total Hgt.	17"	16¾"	Hdle. Lgh.	3,250
Eff. Ram Area (internal) sq. in.	7.980	11.045	Wgt. Lbs.	GB-11.70



GAUGE EQUIPPED

Equip your Blackhawk Hand Jacks with gauges for fast, accurate, low-cost laboratory, production and construction tests. On the job reports prove that Blackhawk gauges are widely used for fatigue, deflection, stress and rupture tests; testing of materials, welds, castings; testing density of soil and road surfacing materials.

Two types of Blackhawk gauges measure "Lbs. Total Load" or "Lbs. Per Sq. Inch." "Lbs. Per Sq. Inch" gauges register internal fluid pressure of jack for testing. Order C-107L for CG-9B and DG-8.7B; Z-722 for all 20, 30, and 50 ton DeLuxe Heavy Duty Jacks.

All Blackhawk gauges are highly accurate and conform to Government Standards with variations of only plus or minus 2%.

SPECIFICATIONS

Jack Model Number	Uses Gauge Model	Gauge Reading Lbs.	Lbs. Per Division	No. of Divisions
CG-9B	C-107L	10,000	250	40
DG-8.7B	C-107L	10,000	250	40
EA-11	EA-100L	50,000	500	100
EA-27	EA-100S	50,000	500	100
FA-11	FA-100L	80,000	1000	80
FB-11	FA-100L	80,000	1000	80
FC-11	FC-100L	80,000	1000	80
GB-11	GA-100L	120,000	2000	60
GC-12	GA-100L	120,000	2000	60
NC-12	NC-100L	240,000	4000	60

TWO HIGH LIFT JACKS

Both have two pumps, one for fast contact, one for smooth, easy lifting.

EA-28 Powerful, portable, tops for road service. Will lift loaded trailers. Two pumps, one for fast contact, one for easy lifting. **EA-27** Jack only and **EA-281** Dolly only also available.

EA-28



SPECIFICATIONS

EA-28	EA-27
Low Height	27½"
Capacity	20 tons
Hyd. Lift	22½"
Total Height	49⅛"
Eff. Ram Area (Int. Sq. In.)	5.157
Ram Plunger, Dia. In.	2.250
Base Size (overall)	8½" x 8½"
Handle No.	3
Handle Length	20"
Weight, Lbs.	145

EA-27



BLACKHAWK®

New Scissors Jacks

IDEAL FOR FOREIGN AND SPORTS CARS

J-30



J-31



J-32



Your choice of three high-quality, low-priced jacks for side rail or under axle use. All steel construction, all riveted joints, saddles to fit any axle. Sealed thrust bearing and 10-pitch Acme thread screw provide easy lifting. Convenient 52" one-piece folding handle.

Heavy duty J-32 has extra 4 to 1 sealed gear speed-to-power ratio — makes heavier load lifting a snap.

SPECIFICATIONS

Model	Capacity	Low Height	High Height	Lifting Range	Base	Screw Dia.	Gear Ratio	Handle	Weight
J-30	1 Ton	5"	14"	9"	7" x 4 3/4"	5/8"	—	52"	11 1/8 Lbs.
J-31	2 Ton	4"	14 3/4"	10 1/4"	7 1/4" x 4"	5/8"	—	52"	14 1/3 Lbs.
J-32	2 Ton	4"	15 1/2"	11 1/2"	8" x 5"	3/4"	4:1	52"	21 1/4 Lbs.

GARAGE HORSES and ROCKER STANDS



AX-2



Here's all the rugged, low-cost garage horses needed for any job!

- "Load-lock" handle can't be lowered until load is off!
- Reinforced joints make horse tougher — won't buckle or sag!
- No Tipping — Wide-spread legs assure good, solid foundation!

- Sure Grip — Wide area "safety-saddle" gives maximum load contact!
- Fits all cars, trucks — Full adjustable lifting range!
- No Flimsy Parts — No springs, chains to wear out or lose!

SPECIFICATIONS

Model	Cap. (Pair)	Low Height	Max. Height	Base	Weight (Pair)
AX-2	2 Ton	11"	17 1/2"	8" x 9"	15 lbs.
AX-5	5 Ton	14 3/4"	24 1/2"	10" x 12"	30 lbs.
AX-7	7 Ton	20"	30"	12 1/2" x 14 3/4"	44 lbs.
AX-10	10 Ton	18 1/4"	30"	12 3/4" x 14 1/4"	76 lbs.
AX-11	10 Ton	28 1/4"	48 1/4"	30 1/2" x 30 1/2" x 30 1/2"	120 lbs.

NEW AX-75 ADJUSTABLE HIGH HORSE



- Changing or greasing springs
- Removing shock absorbers
- Adjusting brakes
- Undercoating
- Repairing differentials
- Replacing oil filters
- Replacing tail pipes & mufflers
- Installing & removing springs
- Greasing universal joints

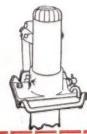
AX-75 High Horse handles cars under every hoist or pit . . . swivel pad, twin post frame or drive-on. Easily adjusts from 57" to 80" in any of 7 working heights. Large 5" x 5" saddle firmly holds part to be braced. Tripod design for solid footing.

SPECIFICATIONS

Capacity	Passenger Car . . .	Increments w/ TC-7 Jack	Infinite 63 3/4" to 93"
Low Height	57"	TC-7 Jack	24" per side
High Height	80"	Base	5" x 5"
Increments	57, 60, 64, 68, 72, 76, 80	Saddle	49 Lbs.
Low Height w/TC-7	63 3/4"	Weight	
Heigh Height w/TC-7	93"	Weight w/ TC-7 Jack	57 Lbs.

PIN-POINT ADJUSTMENT WITH TC-7

From 63 3/4" to 93" by adding Blackhawk TC-7 1 1/2-ton Hand Jack to saddle of AX-75. The answer where "Just a little more" adjustment is needed!



SELF-CENTERING ROCKER HEAD STANDS

MODEL AX-30 PASSENGER CAR STANDS

Perfect mates for ML-30 Mobile Lift (see pg. 13). Lets you raise all four wheels. Wide rocker saddle swivels to center load. Impossible to lower accidentally under load. No springs, chains to wear or lose.

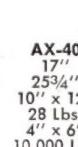
AX-30



Specifications
Low Height
High Height
Base
Weight (pair)
Saddle Size
Capacity

AX-30
13 1/2"
20 1/2"
8" x 9"
17 Lbs.
4" x 6"
3000 Lbs.

AX-40



AX-40

AX-40
17"
25 3/4"
10" x 12"
28 Lbs.
4" x 6"
10,000 Lbs.



MODEL AX-40 HEAVY DUTY MODELS

Raise all four wheels with these 5-ton Rocker Stands and ML-40 Mobile Lift (see pg. 13). Wide spread legs, wide rocker saddle hold and center loads. Reinforced joints won't buckle or sag. Load locking handle prevents accidental lowering.

Low Cost Bumper Jacks

BUMPER JACKS

SCREW, RATCHET, HYDRAULIC



Now from Blackhawk, one complete line of bumper jacks. They're tough, they're low cost! No matter what the favorite . . . sturdy tripod, sure-footed bipod, fast-acting ratchets, powerful hydraulic . . . Blackhawk has it! And every one designed to give trouble-free service, positive safety . . . and at a coin purse price. Take a look, your favorite is here!

Two sturdy, low cost tripods, J-1, J-2. Lightweight J-1 is a handy passenger car jack . . . a top value for service station resale. Tougher, more rugged J-2 is a real buy for service station use or resale.

- Effortless Lifting — So simple a woman can do it! Swivel Top winding zips lifting hook up, even with full load!
- Non-tip Support — Even on rough ground. Triangular design adjusts automatically . . . Gives you level, safe lift!
- Easily Stored — Folds like an accordion . . . means space-saving storage when not in use!
- Bigger Capacity — J-2 is heavier. Handles full 3000 lb. capacity loads with ease.



Handy, compact, with new 2-position hook . . . that's the J-6 bipod bumper jack. New swivel handle requires minimum effort!

- New 2-position lift hook goes low, lifts high, fits every style bumper.
- Extra wide Feet — Loads are always firmly anchored.
- Extra Safe — Automatic safety latch! Jack can't "creep"!



J-19

Versatile J-19 hydraulic utility and bumper jack is useful anywhere powerful hydraulic force is needed!

- Easy to Use — No winding, no cranking . . . just a few light strokes raises any load up to 3,000 lbs!
- Lifts All Cars — Full 19" hydraulic lift plus adjusting hook gives ample clearance.
- Rattle-Free — Strong carrying and storage carton fits any trunk.
- Easy Release — Just one turn of release valve lowers load safely, gently!

J-19 SPECIFICATIONS

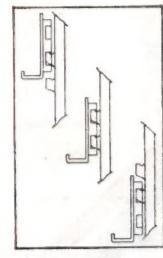
Cap. Tons	1½
Coll. Ht.	21-13/16"
Hyd. Lift	19"
Max. Ht.	40-13/16"
Hook, Low	37/8"-14½"
Hook, High	33½"
Handle No.	H-10
Hdl. Length	14½"
Wt., Lbs.	20

	J-1	J-2	J-4	J-5	J-6	J-7	J-8
Low Height	4½"	4¾"	4½"	5¾"	3¾", 6¾"	4¼", 7¾", 10¾"	4¼", 7½", 10½"
High Height	28½"	28"	29"	30¾"	30¼", 33¾"	26¾", 30¼", 33¾"	26¼", 29½", 32½"
Lift Range	24"	23¾"	24½"	25¾"	26"	22½"	22½"
Total Height	33½"	33"	32"	34½"	37"	33½"	32½"
Handle Length	10½"	10½"	16"	20"	—	14½"	14½"
Weight — Lbs.	14	15¾	8	14	19½	16	15
Capacity — Lbs.	2000	3000	2000	2000	3000	2500	2500

SPECIFICATIONS

J-4

THREE STAGE LIFTING HOOK



J-7



J-8



Both J-7 and J-8 have fixed handle . . . does not ride up and down with load. Both have 3-stage lifting hook that gets lower, lifts higher . . . reach from 4½" to 33½" more than enough for every car! Lift hook fits every style bumper. Handy storage rack holds lift hook . . . handle folds!

J-7 Tough tripod with telescoping ratchet action.
• Exclusive lock safely holds rear legs.

J-8 Quick lifting bipod has wrap-around steel lift channel.
• Extra wide, tip-proof base for more support.

BLACKHAWK®

Hydraulic, electric, air, . . .

THERE'S A MODEL FOR YOU IN

SJ-25

Service Chief®

THE ONE HYDRAULIC ONE-END LIFT THAT HANDLES LATE MODEL CARS . . .

Proved in the field. Engineered to take the toughest punishment. It's the fastest acting, most versatile hydraulic one-end lift on the market.

- Lift bar spreads to full 48" — gets past guards, unusual bumper styling!
- Extra deep elevator — Gets way under to lift by brackets or pads — full 11½"!
- Wide 5" x 5" saddles — Firmly grip with extra support to bumpers!
- No trunk obstruction — Jack always remains same height . . . car trunks always accessible!
- Easy-grip handle — Swings down next to channel. Never in way!
- Safe, Mechanical release — Lowers jack safely, quickly every time . . . it's worry-free!
- Fast positioning — Tricycle gear with swivel "nose" wheel adds extra maneuverability. A real time saver!

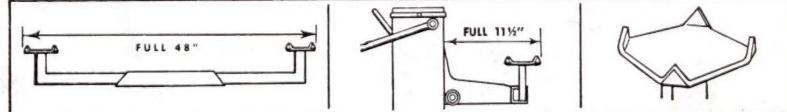


SJ-75 ELECTRIC ONE-END LIFT

Push button lifting is here in model SJ-75 battery-operated hydraulic one-end lift. It's four times faster. There's no winding, cranking, pumping! It's as easy to operate as turning on a light. No complicated maze of wires, cords because SJ-75 is completely self-contained! Standard battery lifts 1½ tons in less than 30 seconds! And all the features of the Service Chief are built in.

- Weatherproof battery storage completely self-contained.
- Mechanical safety release positively locks automatically.
- Wide handles and swivel nose wheel aids maneuvering.

OUTSTANDING FEATURES OF THE SJ-25 AND SJ-75



Exclusive! Wide spread — Lift bar spreads of 14"-48". Blackhawk end lifts have it! Easily clears guards, tail pipes, hitches for easier, safer lifting every time.

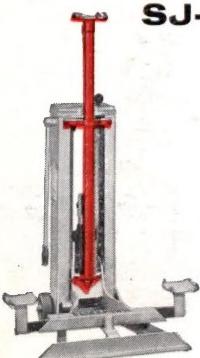
Exclusive! Long reach — Extra deep elevator allows Blackhawk end lift to get past bumper, and lift on brackets or frame.

Exclusive! Big 5"x5" saddles won't damage bumpers . . . spreads weight evenly . . . tightly grips bumper, brackets, pads.

SJ-1007 FOR EXTRA LIFT ON HOIST JOBS

- Changing or greasing springs.
- Removing shock absorbers.
- Adjusting brakes.
- Undercoating.
- Repairing differential.
- Replacing full-flow filters.
- Replacing tail pipes and mufflers.
- Replacing hard-to-get-at oil filters.
- Tire inspection.
- Greasing universal joints.

Now you can service cars on hoist without costly equipment. New low-cost Hi-Lift Kit as accessory means your Service Chief doubles as a high lift jack at a fraction of the cost . . . eliminates the need for an extra man, extra tools. Work at eye level . . . no bending or stretching. Hi-Lift Kit assembles on your SJ-25, SJ-51 and SJ-75 in one minute. Pick up extra profits with your Service Chief . . . get your SJ-1007 Hi-Lift Kit now!



SJ-25 & SJ-75 SPECIFICATIONS

Overall height	38½"
Low lifting point	8"
Lift	22¾"
Total lifting height	30¼"
Saddle adj. width	14" to 48"
Clearance — upright to Saddle	11½"
Capacity	1½ tons
Shipping weight, SJ-25	160 lbs.
Shipping weight, SJ-75	190 lbs.
Universal saddle	5" x 5"

SJ-1007 SPECIFICATIONS

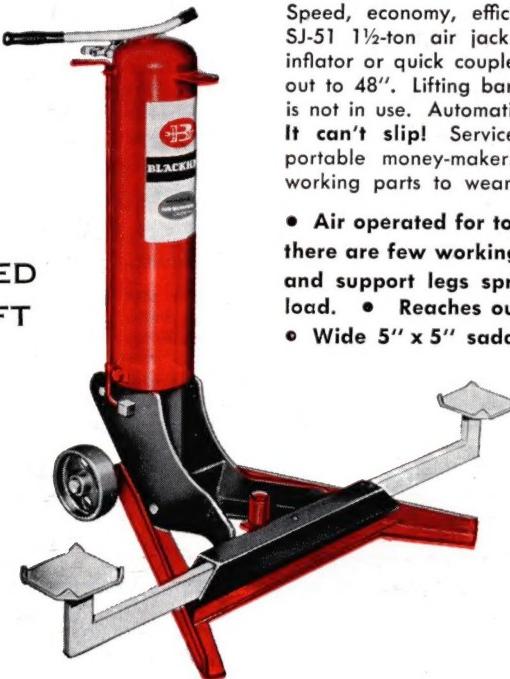
High lift	74¾"
Low lift	52"
Saddle dimensions	5" x 5"

.... mechanical end lifts

EVERY PRICE RANGE, EVERY APPLICATION

ONE-END
LIFTS

SJ-51 AIR-OPERATED ONE-END LIFT



Speed, economy, efficiency . . . you get all three in Blackhawk's SJ-51 1½-ton air jack. Use this fast-acting jack anywhere with tire inflator or quick coupler. Wide, 5" x 5" sure-grip saddles spread way out to 48". Lifting bar retracts to 24" for compact storage when jack is not in use. Automatic safety locks in any raised position up to 30". It can't slip! Service problems are over with this free-wheeling, portable money-maker! Because it's air operated there are fewer working parts to wear. Your SJ-51 is always ready for action!

- Air operated for top efficiency.
- No service problems because there are few working parts.
- Extra long tricycle wheel design and support legs spread out to 28½" to evenly spread weight load.
- Reaches out to 48" — wider spread . . . easier lifting.
- Wide 5" x 5" saddles give firm support.

SPECIFICATIONS

Overall height	39½"
Low lift	8"
High lift	30"
Saddle adjustment	14" to 48"
Clearance—upright to saddle	14½"
Universal saddle	5" x 5"
Capacity	3,000 lbs.
Shipping weight	158 lbs.

SJ-11 MECHANICAL

Jeep-Jack®

Thousands of service stations agree . . . The SJ-11 Jeep-Jack one-end lift has no rival! Proven air-frame construction is tops for strength and portability! Use it everywhere . . . on the wash rack, drive or in the service department, service truck or "cycle." "Flip-Fit" double adjustable saddle supports quickly flip to either of two positions for

varying bumper styles. Famous Saginaw Screw coupled with free-moving universal handle action insures the easiest, quickest lifting on the market. Eight friction-killing nylon pads give an easy lift every time. Automotive men call it the finest mechanical service jack ever built. It's always ready for routine or emergency jobs, year after year.

SPECIFICATIONS

High lifting height	29"	Saddle spread	4½" x 22½"
Low lifting height	7¾"	Weight	50 lbs.
Total height	33"	Capacity	1½ tons

- Air-frame construction.
- Flip-Fit saddles.
- Lightweight portability.



SJ-12 HYDRAULIC

Lightning

You asked for it! A low priced hydraulic one-end lift with lightning contact. Now it's here . . . the portable 1½-ton SJ-12 "Lightning!" This tough jack with proven air-frame construction for toughness and portability has the quickest contact of all! Just pull up the

lift column and the "Flip-Fit" saddles tightly grip the bumper. Smooth hydraulic power does the rest! Spring controlled release lever and mechanical safety locks gives double safety! Toss this rugged jack into your service truck for really fast road service.

SPECIFICATIONS

High lifting height	29"	Saddle spread	4½" x 22½"
Low lifting height	7½"	Weight	70 lbs.
Height of jack	34"	Capacity	1½ tons

- Quick contact.
- Air-frame construction.
- Easy portability.
- Hydraulic power.



BLACKHAWK®

A Complete Line of



Building dependable service jacks is the end result of continuous research in determining what the field needs in keeping pace with ever-changing car and truck styling. This is why Blackhawk is always first in modern, job-designed equipment. When you use

Blackhawk Service Jacks you make more money because you have equipment designed and manufactured to give years of trouble-free service. The exclusive jack features described below illustrate why Blackhawk is your best service jack buy every time.

SJ-23 IMPROVED, TOUGH 1½-TON CURB JACK

This time-tested 1½-ton curb jack is the basic floor jack for service stations, garages, dealers. New exclusive features add up to a "must" buy!

- Hermetically sealed power unit is one piece malleable iron — No plugs, seams, breather holes to leak oil, catch dirt or water.
- No accidental lowering — Safe, stand-up handle disengages release valve automatically. It can't be lowered accidentally!
- Stronger, wider lifting arm — Now made of malleable iron. Wider arm gives extra support, longer life!
- Easier maneuvering — Wider swivel wheels and axle. Positions jack instantly — no wasted motion!
- More floor clearance — Redesigned frame! Jack slips under lowest overhangs. Less stooping, less squatting!

SJ-17 has all the important features of the SJ-23 but has fixed wheels and saddle. Popular for garage and road service, for quick tire changes, brake adjustments, wash rack jobs.

SJ-18 2-TON SERVICE JACK COMBINES STRENGTH WITH STYLING

Never before has so much been offered in a two-tonner. It's as modern as tomorrow's cars. Handsome showroom styling plus the many features below all add up to the best 2-ton buy ever!

- Less weight — more strength — Made of one piece aluminum alloy.
- Lightning lift — two pumps in one — Speed to contact load quickly and power to lift the heaviest loads! And it's automatic!
- 3-Piston handle — Full power stroke in any of 3 positions.
- Leak-proof — Vital power unit is one piece malleable iron. No seams or plugs to wear!

SPECIFICATIONS

	SJ-23	SJ-17	SJ-18	S-4
Capacity, Tons	1½	1½	2	4
Low Saddle Hgt.	4½"	3¾"	4¼"	4¼"
Hydraulic Lift	15"	15"	15¾"	19¾"
Max. Saddle Hgt.	19½"	18½"	20"	24"
Max. Frame Hgt.	6½"	6½"	5½"	6¾"
Size of Saddle	5" dia.	3¾" x 4¾"	5" dia.	4½" x 6¾"
Chassis Length	35"	35"	42"	49"
Handle Length	42½"	42½"	47"	44"
Overall Length	74"	74"	87"	90"
Front Wheel Dia.	3½"	3½"	3½"	4½"
Weight, Lbs.	82	72	105	190

S-4 MOST DEPENDABLE 4-TON SERVICE JACK ON THE MARKET



Here's the most popular 4-ton service jack in the field! The S-4 handles all cars and light trucks with equal ease. It's been service tested, proved on the job. The S-4 can't be beat!

- Built like a bridge — Rigidly bolted at 12 points! You get years of full capacity loads with no distortion.
- Fingertip control — Every vital control is at the handle. No searching, bending for hard-to-get-at levers!
- Avoid unauthorized use — Key locks release valve! Prevents accidents!
- Fast positioning — Extra low chassis slips under lowest axle, frame!
- Fast spotting — Built in spotlight "peeks" under load for time saving positioning!
- Free floating lifting arm and exclusive hollow plunger keep all dangerous side stresses from vital power unit — gives trouble free service year after year!

rugged service jacks

SERVICE JACKS

SJ-16, TEN-TONNER HANDLES THE BIG JOBS

Full 10 tons of power for anything that rolls into your shop. New, improved saddle and swivel wheels lets you sneak this service-proved bull dozer under the lowest axle trucks. There's less stooping — less squat-

ing — easier spotting because long, low chassis glides under overhangs faster. Big 18" lift range assures more than working clearance. Faster load contact with convenient foot operated pump... saves you time!

- Safety lock on handle prevents accidental lowering for greater efficiency, easier operating
- Large Cupped Saddle for solid support
- Wide base gives extra sturdiness
- Long frame (66") reaches under overhanging bodies. Easy spotting, faster working
- Full or part stroke lift means no wasted motion

- Roller bearing front wheels means easier dollying, positioning. Do more jobs faster
- Foot pumping assures faster load contact
- Featherweight handle has spring balance for ease of operation. A few light strokes lift any load

SPECIFICATIONS

	SJ-16	SJ-20
Frame high point	8 $\frac{7}{8}$ "	10 $\frac{1}{4}$ "
Saddle low point	7"	8"
Saddle high point	24 $\frac{3}{4}$ "	25 $\frac{1}{2}$ "
Lifting range	17 $\frac{3}{4}$ "	17 $\frac{1}{2}$ "
Frame length	66"	68 $\frac{1}{2}$ "
Handle length	40"	40"
Width	22"	24 $\frac{1}{2}$ "
Capacity	10 tons	20 tons
Weight	350 lbs.	530 lbs.



SJ-20, LIFTS 20-TON LOADS WITH EASE

With a service giant like this you can lift the tremendous loads of today's modern trucks, busses, construction equipment, and other off-the-road-vehicles. Extra long heavily reinforced

main frame with welded box-type construction. Sturdy lifting arm, three large front wheels for greater load carrying ability... a tough jack for tough jobs!

- Convenient foot operated pedal — speed pump quickly lifts saddle to load.
- Wide spread wheels give added safety.
- Dual caster wheels provide easy maneuvering, great mobility, fast spotting.
- Lifts from a low of 8" to a high of 25 $\frac{1}{2}$ ".
- Little handle effort even with capacity load.



Giants like this are no problem with the tough, fast-lifting SJ-20! The SJ-20 combines the strength of a giant with the maneuverability, ease of operation of a featherweight. Extra long 68 $\frac{1}{2}$ " chassis slips under overhangs with ease. Foot operated speed pump quickly moves saddle to load. Full 20-tons of power lifts heaviest loads with just a few light strokes of the handle.

BLACKHAWK®

T - Lifts . . . for safe

FOR EASIER AUTOMATIC TRANSMISSION SERVICE

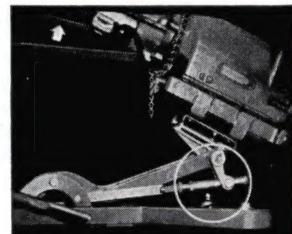
T-1 "LO-MATIC"

Now one man equipped with this new T-Lift can service transmissions faster than ever before. This T-Lift moves transmissions safely in any direction with precise, effortless control for perfect positioning and alignment.

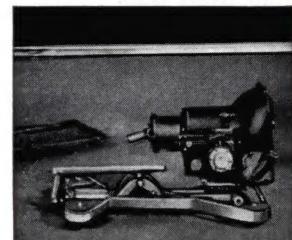


Safely "float" transmission into exact position without tough manual handling. Sure-grip chain holds load safely in place, won't damage pans. Saddle tilts 56 degrees forward, 6 degrees backward and 10 degrees to either side. Now it's a cinch to align locating dowels and bolt holes. Time-saving "All-Make" adaptor adjusts quickly to support all current and future automatics. Rugged unit is easily handled and positioned when working underneath car. Four large swivel casters are spaced for maximum stability, ease of movement.

Now there's no reason to turn down extra profitable business because you aren't properly equipped. With this low-cost, high-profit making T-1 you can handle all the car transmission jobs that roll into your shop. Every service shop should have at least one "Lo-Matic."



Safely "float" transmissions into exact position without dangerous manual handling and juggling! Handles more jobs because it works faster!



Easy to maneuver! The "LO-MATIC" slips easily under modern low-slung cars. All controls are easy to reach from creeper.

T-1 SPECIFICATIONS

Capacity	1,000 lbs.
Minimum Low Height*	5½"
Maximum Height*	24"
Length, overall	35½"
Width at widest point	20½"
Shipping Weight	95 lbs.

*Adaptor adds 1/2"-3 1/2" to height

FOR CARS ON TWO POST LIFT OR OVER PIT

T-2 "HI-MATIC"

The answer to fast one man transmission service on cars standing on two-post lift or over a pit. Exclusive "Dual Range" raises up to 72" . . . lowers to 32", eliminates manual lifting. The fast adjusting Universal Adaptor has precision controls which tilt it forward 28 degrees, backward 10 degrees, right and left 13 degrees and laterally 3". Two-speed foot operated release valve saves time. Built-in overload valve releases automatically at 1,000 lbs. Large, free rolling wheels assure smooth, easy dollying to work bench.

T-2 SPECIFICATIONS

Capacity	1,000 lbs.
Minimum Low Height*	28 1/4"
Maximum Height*	69"
Caster Center	3 equally spaced on 38" dia.
Pump Stroke	8"
Reservoir Capacity	4 qts.
First Stage Lift of Ram per Pump Stroke	
1/4" per stroke	
Second Stage	
1/2" per stroke	
Adapting Ram Socket	1" dia. x 3" deep
Shipping Weight	135 lbs.

*Carrier adds 3 1/8" and Adaptor adds 1/2"-3 1/2" to height



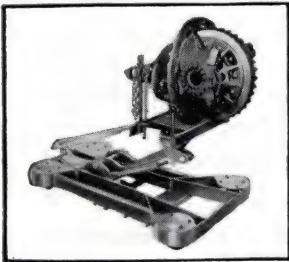
easy one-man operation

T-LIFTS

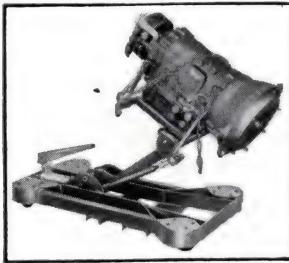
FOR FASTER TRUCK TRANSMISSION SERVICE

New T-4 truck transmission jack

Newly redesigned T-4 is especially engineered to tilt to either side as well as front and back. With this rugged workhorse you can tilt any truck transmission or differential 45° forward, 12° back and 10° to either side. With sure-spot accuracy you can easily remove or install all shapes, all sizes, all makes of automatic transmissions, differentials and clutches! All angle pump rotates 360° for fast, convenient operation.



Extra long support bars handle any type or size differential, and carrier assemblies. Conforming chain sling holds unit . . . no extra adaptors, parts.



Combination controlled and floating side to side and front to back tilt permits unit to clear every obstruction. Allows pin-point positioning during transmission removal or replacement.



T-4 SPECIFICATIONS

Weight	250 lbs.	Adaptor Height — Lowered	8½"
Height O.A.	8½"	Adaptor Height — Raised	31¼"
Width O.A.	29¾"	Wheel Diameter	4"
Length O.A.	46½"		

FOR EXTRA PROFITS FROM TRANSMISSION SERVICE

T-3 "T-MATIC"

Here's the low cost transmission jack for real economical transmission service for cars on any type lift or over pit. This dependable, light weight "T-matic" has all the important work-saving features of the T-2, except for the dual range. Easy one man operation, precision controlled positioning with fingertip action and easy maneuvering make this jack ideal for fast transmission service. Light weight amazingly low-cost, this T-lift brings you extra profits from transmission service — puts you in business in a fast growing field.

T-3 SPECIFICATIONS

Capacity	1,000 lbs.	Caster Centers	3 equally spaced on 38" dia.
Minimum Low Height*	38"	Reservoir capacity	3 qts.
Maximum Height*	69½"	Shipping Weight	125 lbs.

*Carrier adds 3½" and Adaptor adds ½"-3½" to height



Do More Jobs Quicker, Easier, With These Accessories

For Replacement

TK-70 Universal Adaptor. Standard Equipment on T-2, T-3. Contains precision controls for controlled tilt and lateral slide. Holds "All-Make" Adaptor.

TK-320 "All-Make" Adaptor. Standard equipment on all T-Lifts. Fits any automatic and conventional car

or truck transmission up to 500 pounds excepting those handled by TK-19.

For Added Versatility

TK-11 Engine Support Kit holds and protects engine, pan and connections.

TK-19 Adaptor for '50-52 Powerglides with out removable rear engine mount bracket.

BLACKHAWK®

Time saving wheel dollies

SLASH TIRE-WHEEL JOB TIME 80%

Remove, replace, lift and transport heavy truck wheels . . . both single and dual faster and easier than ever before! End the high cost of equipment downtime with Blackhawk Wheel Dollies . . . handle loads up to 2600 lbs. with ease! Speeds fleet maintenance like no other wheel dolly on the market. They're a MUST for every wheel, tire and brake job . . . ends damage to grease retainers, bearings!

Blackhawk Wheel Dollies cut job time up to 80% because only one man is needed to completely service all four wheels instead of three men with obsolete greased tin and sledge hammer methods. Three units to choose from in both mechanical and hydraulic models! Check the individual features of all three models and then start servicing your heavy equipment the fast, labor saving way!

WD-10 MECHANICAL WHEEL DOLLY 1500 LB. CAPACITY



Every shop can afford this tough, inexpensive WD-10 mechanical wheel dolly that handles all diameter tires up to 1500 lbs! It's tops for removing, replacing, lifting and transporting heavy single or dual wheels. Has easy-action scissors-type jack and reversible ratchet and self-locking screw.

- Three ball bearing swivel caster wheels offer extreme maneuverability.
- Lifting arm revolves . . . eliminates tugging, pushing.
- Adjustment screw assures perfect horizontal alignment with axle shaft.

WD-20 HYDRAULIC WHEEL DOLLY 1500 LB. CAPACITY



This powerful, fast-acting Blackhawk Hydraulic Wheel Dolly is built for rugged use, trouble-free service. Vital equipment in every city, county, utility, motorbus and truck transport service garage. Slash downtime by speeding brake repairs, tire switching, wheel lubrication . . . and without damaging vital parts. Handles every diameter tire, both single and dual!

- Large 4" swivel wheels, ball bearing casters for effortless maneuverability.
- Free moving lifting arm rollers help you align wheel in seconds.
- Specially designed 2" leveling adjustment screw helps you align wheels to axle with pin-point accuracy.
- Smooth, powerful Blackhawk hydraulics does all the work.

WD-30 HEAVY DUTY HYDRAULIC WHEEL DOLLY 2600 LB. CAPACITY

Powerful Blackhawk hydraulic unit effortlessly lifts the largest single or dual wheels with just a few strokes of the pump. Extra strong steel tubing solidly supports the heaviest loads. If you service heavy trucks, busses, tractors, off-the-road equipment, you need a Blackhawk WD-30 for faster, more efficient work!

- Full 2600-lb. capacity for heaviest, toughest jobs.
- Perfect alignment of wheel to axle in seconds with leveling adjustment screw.
- Heaviest loads are easily carried any place in shop with swivel wheels and ball bearing caster.

SPECIFICATIONS

	WD-10	WD-20	WD-30
Capacity	1500 lbs.	1500 lbs.	2600 lbs.
Length	38½"	38½"	40½"
Width	43"	43"	43"
Lifting Arm Length	28"	28"	30"
Weight	110 lbs.	115 lbs.	130 lbs.
High Lift Height	5"	5"	6"

Fast Acting Mobile Lifts

MOBILE
LIFTS

ML-30 FRONT END MOBILE LIFT FOR PASSENGER CARS IDEAL FOR SHOP WITH LIMITED FLOOR SPACE



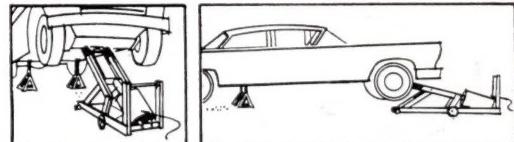
Reduced length, more compact design, new engineering are just a few of the features of the low cost model ML-30. This revolutionary front end mobile lift has full 3,000-lb. capacity. Eight working heights with positive mechanical safety lock allows the utmost safety, convenience. With model AX-30 Rocker Stands the rear end or all four wheels can be raised in seconds. See page 4 for AX-30 Rocker Stands.

- Stores on end in only 28 sq. in.
- Lifts all four wheels with rocker stands.
- Lifts front end of every car.
- Eight working heights.

SPECIFICATIONS

Capacity	3000 lbs.
Height	28"
Width	28"
Length	56"
High Lift	34"
Shipping Wt.	260 lbs.

ROCKER HEAD STANDS



RAISE ALL FOUR WHEELS IN SECONDS!

Here's all you do: Raise car to full height. Place rocker stands as far back on side rails of vehicle as possible. Then just lower to stand height. That's all there is to it! Countless jobs can be done faster, easier and without tying up a hoist!

ML-40 TWIN TANK MOBILE LIFT



The twin tanks of this model permit lifting all passenger cars from either end. Streamlined tanks are only 8½" high . . . easily slip under lowest overhang . . . reaches 61½" under car . . . lift to a high 55"! Two safety

ratchets give twice the safety . . . Two tanks give twice the efficiency. Model AX-40 Rocker Stands enable you to lift all four wheels off the ground a full 24½". See page 4 for AX-40 Rocker Stands.

- One piece 76" frame spreads weight evenly.
- Front end adaptor for some late model cars included free.
- Large steel ball bearing wheels allow exceptional maneuverability.
- Lifts 55" high, yet roll back or "chasing" is held to only 4".
- Tops for body repair; brake, wheel-tire, shock work.

SPECIFICATIONS

Capacity	3500 lbs.
Height	31"
Width	31½"
Length	76"
High Lift	55"
Saddle Spread	20¼"
Shipping Wt.	478 lbs.

ML-50 HEAVY DUTY MOBILE LIFT FOR TRUCKS



Solidly built for full 5500-lb. capacity. Model ML-50 lifts either front or rear of truck. Every fleet garage needs one for faster lubrication, steam cleaning, spring and brake jobs, tire and wheel work, replacing axles or under

body painting. This money-saver pays for itself on the first few jobs! Cut-away steel frame gets a long 70" under every truck, clears lowest axles.

SPECIFICATIONS

Capacity	5500 lbs.
Height	33½"
Width	33½"
Length	70"
High Lift	50"
Saddle Spread	22¼"
Shipping Wt.	520 lbs.

- Lifts from a low of 5½" to a high of 50".
- Two-speed air lift contacts and lifts faster than any other method.
- Swings into position in seconds with large ball bearing steel wheels.
- Mechanical safety ratchets can't slip or falter, always support heaviest loads.

BLACKHAWK®

Manual, electric and . . .

COMPLETE LINE OF 38 BASIC MODELS

One man can lift and transfer up to two tons with a Blackhawk mobile crane. Rugged I-Beam construction, built in brake, standard boom extension for hard-to-reach jobs. Crane folds when not in use, won't take valuable space.



TWO LOW COST 1/2 TON MODELS

Model MC-50 — Floor model (shown) with four point support for utmost stability, safety. Two swivel casters give exceptional maneuverability. Large 6" load carrying wheels give positive tracking.

Model MC-52 — Has same lifting specifications as MC-50, but has truck mounting well instead of floor frames. Easily removed from well when full truck required. Mounts flush with truck deck. Also easily placed in wells on loading docks, welding tables, machine shops . . . wherever heavy loads are lifted.

MC-5002 Truck Mounting Well only.
MC-5008 Extra 15" Boom only.

SPECIFICATIONS	MC-50	MC-52
Capacity	1000 lbs.	1000 lbs.
Boom Height, Highest	88"	83"
Boom Height, Lowest	28"	23"
Boom Length	45"	45"
Overall Height	54"	49"
Overall Length	48"	—
Inside Length (legs)	33 1/2"	—
Overall Width	33"	—
Inside Width (legs)	29"	—
Height of Legs from Floor...	6"	—
Wheels		
Load Carrying (2 roller bearings)	6"	—
Steering (2 swivel casters)	4"	—
Total Weight		
Crane	207 lbs.	99 lbs.
Mounting Well	—	17 lbs.



MANUAL TYPE — 1/2, 1 & 2 TON

Manually operated for top economy. Easy strokes of the double-action pump raise the load to a high of 93". Versatility is unsurpassed . . . easily removed from base to mount in truck deck or loading dock. They're perfect to load and unload trucks, tires, barrels, move machinery, remove and replace engines, move heavy shop equipment.

ELECTRIC TYPE — 1/2, 1 & 2 TON

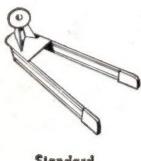
Get real speed with these mobile cranes! Battery-operated electric power operates Blackhawk hydraulic system. Works three times faster than manual operation and with NO effort! High efficiency hydraulic system means minimum drain on battery. Power supplied by 6 or 12 volt battery (6 volt furnished unless otherwise specified).



ELECTRIC MANUAL TYPE—1/2, 1 & 2 TON

Here's the utmost in versatility! Now have both the speed of an electric pump and added value of a hand pump all on one crane. Get fast, continuous operation under any conditions, for any period of time. Get over 150 lifts on a single battery charge. And, if battery runs down, your hand pump is always ready for action! Use as floor or truck crane!

FRAMES AND MOUNTING WELLS



STANDARD "A" Frame furnished unless otherwise specified. It's the universal frame for most lifting jobs.

STRADDLE "A" Frame is invaluable for larger crates, material handling in factories, etc.



Standard



12" Elevated

Move your crane from floor to truck or dock just by installing additional Mounting Wells. Two types available, each can be ordered with special swivel bearings.

electric-manual hydraulic

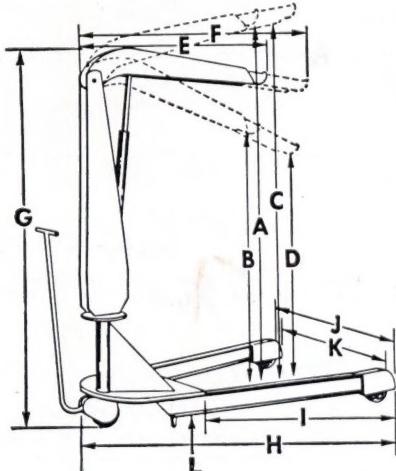
CRANE, WELL, AND FRAME ORDERING INFORMATION

To order the crane only, use model number from column 1.
 To order crane with Standard "A" Frame and Well use column 2.
 To order crane with Standard "A" Frame only, use column 3.
 To order crane with Standard Well only, order from column 4.

To order crane with other than Standard Well or "A" Frame — order type of crane from col. 1 and include well or frame number from separate lower tables. To order frame or well only — specify model number from lower tables.

CRANE TYPE	ONE-HALF TON				ONE TON				TWO TON			
	1	2	3	4	1	2	3	4	1	2	3	4
CRANE ONLY	V	V	V	T	CRANE ONLY	V	V	T	CRANE ONLY	V	V	T
MANUAL	MC-1000	MC-100	MC-101	MC-102	MC-2000	MC-200	MC-201	MC-202	MC-3000	MC-300	MC-301	MC-302
ELECTRIC	MC-1050	MC-150	MC-151	MC-152	MC-2050	MC-250	MC-251	MC-252	MC-3050	MC-350	MC-351	MC-352
ELECTRIC- MANUAL	MC-1060	MC-160	MC-161	MC-162	MC-2060	MC-260	MC-261	MC-262	MC-3060	MC-360	MC-361	MC-362

FRAME TYPE	1/2-Ton	1-Ton	2-Ton	WELL TYPE	1/2-Ton	1-Ton	2-Ton
Standard "A" Frame ..	MC-1001	MC-2001	MC-3001	Mounting Well	MC-1002	MC-2002	MC-3002
Straddle "A" Frame ...	MC-1006	MC-2006	MC-3006	Mounting Well with Bearings	MC-1003	MC-2003	MC-3003
				Elevated Mounting Well	MC-1004	MC-2004	MC-3004
				Elevated Mounting Well with Bearings ..	MC-1005	MC-2005	MC-3005



SPECIFICATIONS	1/2 Ton	1 Ton	2 Ton
Capacity	1000 lbs.	2000 lbs.	4000 lbs.
Capacity, Boom Extended	750 lbs.	1500 lbs.	3000 lbs.
A Boom Height Highest	93"	114"	109"
B Boom Height Lowest	24"	33"	35"
C Boom Height Highest Ext.	104"	124"	117"
D Boom Height Lowest Ext.	9"	19"	20"
E Boom Length	42"	45"	45"
F Boom Length, Extended	56"	60"	60"
G Overall Height	64"	76"	80"
H Overall Length	68"	77"	77"
I Inside Leg Length	44"	49"	51"
J Overall Width	33"	46"	46"
K Inside Leg Width	29"	40"	40"
L Height of Legs from floor	5 1/2"	7 1/2"	9"
Wheel Diameter	5"	6"	8"
Total Weight	360 lbs.	420 lbs.	630 lbs.
Weight "A" frame	185 lbs.	215 lbs.	395 lbs.
Weight of crane	175 lbs.	205 lbs.	235 lbs.

NOTE: For lift height from truck subtract 24" (Height of "A" frame to flange). 4' chain with slip and grab hook is standard equipment.

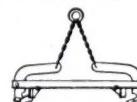
DO MORE JOBS WITH PROFIT MAKING ACCESSORIES



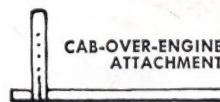
CROSS BAR FOR SLINGS
Overall length 36". Accommodates 4" wide endless belt slings. Belt spacings 13", 22 1/2" and 32" center to center.



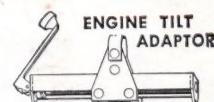
TRANSMISSION ATTACHMENT*
Fits all model cranes. Extends 42" beyond end of wheels to safely cradle transmissions. Perfect for rear end work and other under-body jobs.



VERTICAL DRUM LIFTER
The right answer to lifting drums in vertical position. Handles open or closed steel drums with equal ease.



CAB-OVER-ENGINE ATTACHMENT
Full 60° adjustment from main boom. Has same capacity as "Extra Length Boom." Adds 24" to standard boom for jobs where overhead space is at a premium and boom must enter horizontally.



ENGINE TILT ADAPTOR
Fits all model cranes. Just one man can handle all passenger car and light truck engines. Universal handle tilts engine up or down for fast removal or easy installing.

Additional accessories such as Four Foot Chain and Hook Assembly, Canvas Cover* and Garage Horse available but not shown.

ACCESSORY ORDERING INFORMATION

ACCESSORY	1/2-Ton Models	1-Ton Model	2-Ton Model
Four Foot Chain and Hook Ass'y..	MC-1007	MC-2007	MC-3007
*Extra Length Boom	MC-1008	MC-2008	MC-3008
*Transmission Attachment	MC-1009	MC-2009	MC-3009
Cross Bar for Slings	←	←	MC-3010
Drum and Barrel Sling	←	←	MC-3011
Vertical Drum Lifter	←	←	MC-3012
Cab Over Engine Attachment	←	MC-2013	MC-3013
*Canvas Cover	MC-1014	←	MC-3014
Engine Tilt Adaptor	←	←	MC-3015
Garage Horse (Truck Stabilizer) ..	←	←	AX-5000

*Not for Models MC-50, MC-52.

EXTRA LENGTH BOOM*

Adds 24" to overall length of boom for those tough jobs requiring extra reach. Replaces standard telescoping boom in seconds. Does not include chain. Capacity for all MC-1000 series models, 400 lbs. Capacity for all MC-2000 series models, 750 lbs. Capacity for all MC-3000 series models, 1200 lbs.

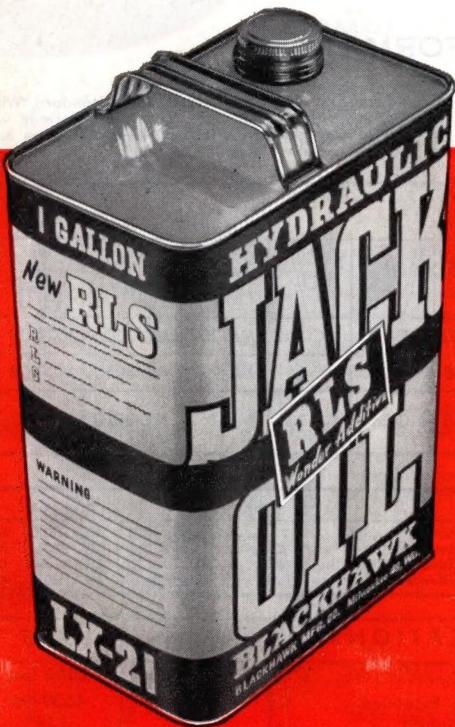
MC-5008 — Extension for MC-50 and MC-52



HORIZONTAL DRUM AND BARREL SLING

Lifts barrels faster. Wide hooks grip tighter as pressure is applied . . . won't slip.

Blackhawk
RLS
hydraulic jack oil



To insure peak jack performance, always use Blackhawk "RLS" Jack Oil — first with Rust Preventers, Lubricity Improvers, Sludge Stoppers: an important combination of ingredients that really prolongs jack life!

Blackhawk "RLS" is the first Jack Oil to provide protection against rust hazards due to moisture . . . first to assure maximum efficiency, minimum wear . . . first with detergent action to prolong oil life. A lower pour point (-65°) and anti-foam additives further protect your valuable jacks!

Blackhawk #LX-21 "RLS" Oil is available in one-quart cans, one and five-gallon cans, and 30 and 55 gallon drums. Take your pick . . . and get the **best** Jack Oil you can buy — Blackhawk "RLS" . . . proved **best** by refinery test!

Blackhawk
service
always
within
reach



BLACKHAWK SERVICE DEPOTS

Authorized Blackhawk Service Stations are strategically located to offer fast, low-cost repair service. Every Service Station is well equipped and stocks genuine Blackhawk parts. Service personnel are trained experts in repairing hydraulic equipment. That's why every Blackhawk product repaired by an authorized Blackhawk service station carries the regular factory guarantee.

Jack/Saver

FOR ALL POPULAR MAKES AND MODELS OF HYDRAULIC JACKS

Blackhawk JACK/SAVER Kits now enable you to obtain replacement parts to fit the makes and models of all popular jacks.

Nearly 80% of all hydraulic jack troubles are due to worn cups, packings, leathers, springs, etc. . . . parts that YOU can replace yourself to save expensive shipping costs, cut costly downtime.

Blackhawk kits contain all the parts and instructions you need to remedy minor jack troubles YOURSELF . . . to save you time and money — no matter what brand of jack you own. Ask for Catalog KC-1.

For MAJOR repairs, it's still best to use the Franchised Service Depot established by the manufacturer of your brand jack.



BLACKHAWK®

BLACKHAWK AUTOMOTIVE DIVISION

Milwaukee 46, Wisconsin, U.S.A.